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EXAMINER	
YENKE, BRIAN P	
ART UNIT	**PAPER NUMBER**
2614	6

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/745,248	TSUI, ERNEST T.	
	Examiner	Art Unit	
	BRIAN P. YENKE	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-21* is/are rejected.

7)☒ Claim(s) *7,22 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment to the title of the invention has been received and is approved by the examiner.

2. Applicant's arguments filed 22 have been fully considered but they are not persuasive.

Applicant's Arguments

a) Applicant states none of the cited references, individually or in combination, disclose or suggest *the constancy value represent "amount of variation among the discrete samples of the digitized video signals within a dimension."* Applicant states that the weighting factor contended by the Examiner does not appear to represent amount of variation among the discrete samples of the digitized video signals within a dimension.

b) Applicant states that Rabii fails to disclose or suggest measuring absolute values between two samples within the same scan line, similar positions of different lines, or similar positions between different frames to generate the H, V or T constancy values. The applicant states that Rabii's diagonal direction does not represent two samples at the similar positions at different video frames.

Examiner's Response

a) The examiner disagrees as stated below in the rejection of claims. The weighting factors are based upon the change/gradient values in at least one dimension,

of the horizontal, vertical and/or diagonal directions. Thus the weighting factors are changed (increased or decreased) or remain the same based upon the changes/values in at least one of the dimensions.

b) The examiner disagree. Initially, it is noted by the examiner that Rabii was incorporated into the rejection to show that taking the absolute value of a number/difference is conventional in the art.

With respect to claim 4, Rabii discloses taking the absolute values from sampled pixels (of the same phase) 21 and 25 and also 22 and 24 (Fig 2) in determining the image gradient in the horizontal direction (col 2, line 39-47).

With respect to claim 5, Rabii discloses taking the absolute values from sampled pixels (of the same phase) 13 and 23 and also 23 and 33 (Fig 2) in determining the image gradient in the vertical direction (col 2, line 39-47).

With respect to claim 6, Rabii et al., US 5,220,414 discloses taking the absolute values from sampled pixels (of the same phase) (Fig 2) in determining the image gradients in the vertical direction, horizontal and diagonal direction/temporal gradients(col 2, line 39-47). As shown in Fig 4, based upon five successive decision signals each consisting of the four single-decision signals (Fig 4), thus comparing previous gradients with current gradients in determining the temporal difference between frames.

In the event the applicant is still in disagreement with the rejection for claims 4-6, the examiners requests the applicant to explain how the samples/points and absolute value in Rabii differ from the claimed invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3a. Claims 1-3, 8-10 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherrer, US 6,504,579 in view of Rinaldi et al., US 6,327,002.

In considering claim 1,

a) *the claimed converting a television broadcasting signal into a digitized video signal* is met where Scherrer discloses that the system can be implemented with both analog and digital circuitry (col 3, line 24-26), where the system can receive analog signals (NTSC and PAL, col 4, line 17-21), thus the analog received signals would then be converted to a digitized video signal, when digital circuitry is implemented.

b) *the claimed separating luminance information and chrominance information of the digitized video signal in a dimension that has a constancy value below a predetermined threshold level...* is met where the luminance (Y) and chrominance (C) information is filtered/separated (Fig 1) based upon the image characteristic parameters (direction . and/or time-dependent where the image parameters characterize the image quality/characteristics (noise, image structures, video frequencies and where the sources originate from (i.e. VCR)) (col 2, line 40-57). As disclosed by Scherrer in the

simplest case, the setting values represent weighting factors in which the image analysis values are increased, reduced, or left unchanged. Thus, the claimed "below a predetermined threshold level" is met by where the setting values represent weighting factors in which the image analysis values are formed in computing matrix 7 by analyzing (via decision device 4) the delayed signal (v0 to v5) in at least one of the horizontal image gradient, one vertical image gradient and one diagonal image gradient (dimensions) in order to change the behavior of mixer 5 which weights and adds the signals to provide a luminance and chrominance output signal. Regarding the constancy value representing an amount of variation amount discrete samples of the digitized video signal within the dimension. Scherrer discloses a system which separates the received signal (whether analog or digital, where digital would meet the discrete samples claimed portion) into luminance and chrominance components, based upon at least one of a horizontal dimension gradient value, vertical gradient dimension value and/or diagonal dimensional gradient value. Therefore, based upon the gradient value in at least one of the dimensions (horizontal, vertical and diagonal) determines whether to increase, reduce or unchange the setting values/weighting factors. Thus Scherrer detects/determines whether a change (constancy value) has occurred within at least one of the dimensions based upon the gradient values, in order to select the appropriate weighted filter combination.

However, Scherrer does not explicitly disclose optionally converting the separated luminance and chrominance information which conforms to input requirements of a display apparatus. As described above, Scherrer discloses a system

which discloses an adaptive filter which receives video signals of different image conditions from different image sources in order to separate the interleaved luminance and chrominance components being adaptive to video signals even after the manufacturing process.

The converting (optionally) of luminance and chrominance information into a format which is displayable is notoriously well-known in the art.

Thus, the examiner incorporates Rinaldi et al., US 6,327,002 which discloses a system which processes the luminance and chrominance information into a desired output. Rinalidi discloses that based on whether a television 30 monitor is connected to a composite video output or the S video output determines whether the processing/bypassing of graphics controller 24 (Fig 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Scherrer which discloses an adaptive filter, which processes television signals to include a television receiver, video recorder, television-capable multimedia device with Rinaldi in order to convert (optionally) the separated luminance and chrominance information into a desired output, in order to display the filtered television signal.

In considering claim 2,

The claimed calculating the constancy value in a horizontal dimension, vertical dimension and a temporal dimension is met where Scherrer discloses that the image parameters are direction and/or time-dependent image gradients (col 2, line 53-57).

The analysis signal include at least one horizontal image gradient, one vertical image gradient and one diagonal image gradient (col 4, line 43-46). Thus decision device 4 determines which filter combination to utilize based on the gradients of the delayed signals.

In considering claim 3,

a) *the claimed sampling the video signal at an integer multiple of a frequency of a chrominance sub-carrier to generate digitized samples* is met where the digitization clock and chrominance subcarrier are phase-synchronized and their frequencies have an integral relationship to each other (col 3, line 39-45).

b) *the claimed storing a number of the digitized samples in a storage medium* is met where the decision device 4 analyzes (temporarily stores) the delayed/temporarily stored signals (vo to v5) and forms matrix control signals (m1-m3) (col 4, line 13-21), and also filter 3 (temporarily stores) which filters the delayed signals.

In considering claim 8,

a) *the claimed converting a television broadcasting signal into a digitized video signal* is met where Scherrer discloses that the system can be implemented with both analog and digital circuitry (col 3, line 24-26), where the system can receive analog signals (NTSC and PAL, col 4, line 17-21), thus the analog received signals would then be converted to a digitized video signal, when digital circuitry is implemented.

b) *the claimed separating luminance information and chrominance information of the digitized video signal in a dimension that has a constancy value below a predetermined*

threshold level... is met where the luminance (Y) and chrominance (C) information is filtered/separated (Fig 1) based upon the image characteristic parameters (direction and/or time-dependent where the image parameters characterize the image quality/characteristics (noise, image structures, video frequencies and where the sources originate from (i.e. VCR)) (col 2, line 40-57). As disclosed by Scherrer in the simplest case, the setting values represent weighting factors in which the image analysis values are increased, reduced, or left unchanged. Thus, the claimed "below a predetermined threshold level" is met by where the setting values represent weighting factors in which the image analysis values are formed in computing matrix 7 by analyzing the delayed signal (v0 to v5) in at least one of the horizontal image gradient, one vertical image gradient and one diagonal image gradient (dimensions) in order to change the behavior of mixer 5 which weights and adds the signals to provide a luminance and chrominance output signal. Mixer 5 receives the corresponding weights for the different filters from computing matrix 7 which receives control signals m1-m3 from decision device 4 based upon the change in image gradients. . Regarding the constancy value representing an amount of variation amount discrete samples of the digitized video signal within the dimension. Scherrer discloses a system which separates the received signal (whether analog or digital, where digital would meet the discrete samples claimed portion) into luminance and chrominance components, based upon at least one of a horizontal dimension gradient value, vertical gradient dimension value and/or diagonal dimensional gradient value. Therefore, based upon the gradient value in at least one of the dimensions (horizontal, vertical and diagonal) determines

whether to increase, reduce or unchange the setting values/weighting factors. Thus Scherrer detects/determines whether a change (constancy value) has occurred within at least one of the dimensions based upon the gradient values, in order to select the appropriate weighted filter combination.

However, Scherrer does not explicitly disclose optionally converting the separated luminance and chrominance information which conforms to input requirements of a display apparatus. As described above, Scherrer discloses a system which discloses an adaptive filter which receives video signals of different image conditions from different image sources in order to separate the interleaved luminance and chrominance components being adaptive to video signals even after the manufacturing process.

The converting (optionally) of luminance and chrominance information into a format which is displayable is notoriously well-known in the art.

Thus, the examiner incorporates Rinaldi et al., US 6,327,002 which discloses a system which processes the luminance and chrominance information into a desired output. Rinalidi discloses that based on whether a television 30 monitor is connected to a composite video output or the S video output determines whether the processing/bypassing of graphics controller 24 (Fig 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Scherrer which discloses an adaptive filter, which processes television signals to include a television receiver, video recorder, television-

capable multimedia device with Rinaldi in order to convert (optionally) the separated luminance and chrominance information into a desired output, in order to display the filtered television signal.

In considering claim 9,

a) *the claimed sampling the video signal at an integer multiple of a frequency of a chrominance sub-carrier to generate digitized samples* is met where the digitization clock and chrominance subcarrier are phase-synchronized and their frequencies have an integral relationship to each other (col 3, line 39-45).

b) *the claimed storing a number of the digitized samples in a storage medium* is met where the decision device 4 analyzes (temporarily stores) the delayed/temporarily stored signals (vo to v5) and forms matrix control signals (m1-m3) (col 4, line 13-21), and also filter 3 (temporarily stores) which filters the delayed signals.

In considering claim 10,

The claimed calculating the constancy value in a horizontal dimension, vertical dimension and a temporal dimension is met where Scherrer discloses that the image parameters are direction and/or time-dependent image gradients (col 2, line 53-57). The analysis signal include at least one horizontal image gradient, one vertical image gradient and one diagonal image gradient (col 4, line 43-46). Thus decision device 4 determines which filter combination to utilize based on the gradients of the delayed signals.

In considering claim 14,

The claimed selecting an appropriate filter to perform the separating based on the constancy value is met where based upon the image gradients/parameters determines the type of filtering performed, in whether the signals are bandpass, bandstopped, comb filtered up, comb filtered down, or field/frame comb filtered (col 5, line 21-52) which are then applied to mixer 5, selected by computing matrix 7 based upon the change in gradients (via decision device 4).

In considering claim 15,

e, i) *the claimed an analog-to digital converter* is met where Scherrer discloses that the system can be implemented with both analog and digital circuitry (col 3, line 24-26), where the system can receive analog signals (NTSC and PAL, col 4, line 17-21), thus the analog received signals would then be converted to a digitized video signal, when digital circuitry is implemented.

e, ii) *the claimed a constancy detector...* is met by decision (analysis) which examines the image content in the respective regions for critical image structures, with a field or frame storage registering both area-related and temporal image characteristics (col 1, line 32-36). . Regarding the constancy value representing an amount of variation amount discrete samples of the digitized video signal within the dimension. Scherrer discloses a system which separates the received signal (whether analog or digital, where digital would meet the discrete samples claimed portion) into luminance and chrominance components, based upon at least one of a horizontal dimension gradient value, vertical gradient dimension value and/or diagonal dimensional gradient value.

Therefore, based upon the gradient value in at least one of the dimensions (horizontal, vertical and diagonal) determines whether to increase, reduce or unchange the setting values/weighting factors. Thus Scherrer detects/determines whether a change (constancy value) has occurred within at least one of the dimensions based upon the gradient values, in order to select the appropriate weighted filter combination.

e, iii) *the claimed a luminance/chrominance separation engine* is met where the filtered signals s1-s4 from filter 3 are fed to mixer 5 where they are weighted and added in order to provide a separated luminance (Y) and chrominance signal (C).

It is noted that Scherrer does not disclose the elements of a general computer system, including:

a) *the claimed a bus*

b) *the claimed a processor coupled to the bus*

c) *the claimed a storage medium coupled to the system controller*

e iv) *the claimed display encoder...to optionally convert the separated luminance information and chrominance information into a first output.*

Scherrer discloses a system which adaptively filters a television signal for a device that processes TV signals, e.g. TV receiver, a video recorder, or a television-capable multimedia device. Scherrer also discloses the use of both analog and digital circuitry, a central controller 9 which is available to the manufacturer and user to supply setting device 8 for storing digital data from the controller (Fig 1). Scherrer does disclose the use of a bus (10) for providing information from a manufacturer and user

from central controller 9 to the setting device 8, which can be used to store fed digital data from controller 9 (col 5, line 53-63).

The use of a computer system/general purpose computer to process television/video signals is notoriously well known in the art.

As disclosed by applicant a general purpose computer includes all the elements , performs all the functions (applicant's Fig 4, page 10, line 15 to page 11, line 6) as conventional in the art.

Nonetheless the examiner is incorporating Rinaldi et al., US 6,327,002, which discloses the use of computers, to include a processor, video graphics circuitry, system memory, external memory (col 1, line 9-21). It should also be noted that a bus is inherent in a computer system. Rinaldi et al., US 6,327,002 also discloses a system which processes the luminance and chrominance information into a desired output. Rinaldi discloses that based on whether a television 30 monitor is connected to a composite video output or the S video output determines whether the processing/bypassing of graphics controller 24 (Fig 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Scherrer which discloses adaptively filtering television signals for a device that processes TV signals, with Rinaldi, by using a computer system which can receive multiple inputs and a variety provide different outputs based on the display apparatus.

In considering claim 16,

the claimed samples the video signal at an integer multiple of a frequency of a chrominance sub-carrier to generate digitized samples is met where the digitization clock and chrominance subcarrier are phase-synchronized and their frequencies have an integral relationship to each other (col 3, line 39-45).

In considering claim 17,

a) *The claimed calculates a constancy value based on the digitized samples retrieved from the storage medium* is met by decision device 4 where Scherrer discloses that the image parameters are direction and/or time-dependent image gradients (col 2, line 53-57). The analysis signal include at least one horizontal image gradient, one vertical image gradient and one diagonal image gradient (col 4, line 43-46). Thus decision device 4 determines which filter combination to utilize based on the gradients of the delayed signals.

b) *the claimed generates a selection signal to represent the dimension wherein the constancy is below a predetermined threshold value* based upon the image characteristic parameters (direction and/or time-dependent where the image parameters characterize the image quality/characteristics (noise, image structures, video frequencies and where the sources originate from (i.e. VCR)) (col 2, line 40-57). As disclosed by Scherrer in the simplest case, the setting values represent weighting factors in which the image analysis values are increased, reduced, or left unchanged. Thus, the claimed "below a predetermined threshold level" is met by where the setting values represent weighting factors in which the image analysis values are formed in computing matrix 7 by analyzing the delayed signal (v0 to v5) in at least one of the

horizontal image gradient, one vertical image gradient and one diagonal image gradient (dimensions) in order to change the behavior of mixer 5 which weights and adds the signals to provide a luminance and chrominance output signal.

In considering claim 18,

a) *the claimed a plurality of filters* is met by filter combination 3, which includes comb down filter 3.1, bandpass/bandstop 3.2, comb up 3.3 and comb field/frame 3.4 (Fig 1)

b) *the claimed a selector, coupled to the filters, wherein the selector chooses the filter to perform the separation based on the selection signal* is met computing matrix 7 which adds/weights the desired filtered signal to perform the separation, where computing matrix 7 receives control signals m1-m3 via decision device 4.

3b. Claims 4-6, 11-13 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherrer, US 6,504,579 and Rinaldi et al., US 6,327,002 in view of Rabii et al., US 5,220,414.

In considering claims 4, 11 and 19,

The combination of Scherrer and Rinaldi does not explicitly disclose measuring an absolute value between the digitized samples to establish an H constancy value.

Scherrer does disclose an adaptive filter which receives delayed signals (which can be either analog or digital) where decision device 4 analyzes the signals to determine the gradients in the horizontal, vertical and diagonal directions to remote the spurious response of the filters by weighting/adaptively filtering the signals based on the image gradients. As stated above, Rinaldi discloses a system which utilizes a computer

system to process video signals into a desired output format, compatible with a display apparatus.

As disclosed by Scherrer, adaptive filters which analyze a signal for area-related and temporal image characteristics is described in WO 90/13978.

The examiner incorporates Rabii et al., US 5,220,414 (of WO 90/13978) which discloses taking the absolute values from sampled pixels (of the same phase) 21 and 25 and also 22 and 24 (Fig 2) in determining the image gradient in the horizontal direction (col 2, line 39-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Scherrer and Rinaldi which disclose an adaptive filter system which computes horizontal, vertical and diagonal gradients in order to adaptively filter the signal to remove noise and optionally convert the separated luminance/chrominance information into a desired display format, with Rabii, by using the absolute value of the difference between pixels which would provide the difference (gradient) between the pixels, where the gradient would be non-negative number.

In considering claims 5, 12 and 20,

The combination of Scherrer and Rinaldi does not explicitly disclose measuring an absolute value between the digitized samples to establish a V constancy value.

Scherrer does disclose an adaptive filter which receives delayed signals (which can be either analog or digital) where decision device 4 analyzes the signals to determine the gradients in the horizontal, vertical and diagonal directions to remote the

spurious response of the filters by weighting/adaptively filtering the signals based on the image gradients. As stated above, Rinaldi discloses a system which utilizes a computer system to process video signals into a desired output format, compatible with a display apparatus.

As disclosed by Scherrer, adaptive filters which analyze a signal for area-related and temporal image characteristics is described in WO 90/13978.

The examiner incorporates Rabii et al., US 5,220,414 (of WO 90/13978) which discloses taking the absolute values from sampled pixels (of the same phase) 13 and 23 and also 23 and 33 (Fig 2) in determining the image gradient in the vertical direction (col 2, line 39-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Scherrer and Rinaldi which disclose an adaptive filter system which computes horizontal, vertical and diagonal gradients in order to adaptively filter the signal to remove noise and optionally convert the separated luminance/chrominance information into a desired display format, with Rabii, by using the absolute value of the difference between pixels which would provide the difference (gradient) between the pixels, where the gradient would be non-negative number.

In considering claims 6, 13 and 21,

The combination of Scherrer and Rinaldi does not explicitly disclose measuring an absolute value between the digitized samples to establish an T constancy value.

Scherrer does disclose an adaptive filter which receives delayed signals (which can be either analog or digital) where decision device 4 analyzes the signals to determine the gradients in the horizontal, vertical and diagonal directions to remote the spurious response of the filters by weighting/adaptively filtering the signals based on the image gradients. As stated above, Rinaldi discloses a system which utilizes a computer system to process video signals into a desired output format, compatible with a display apparatus.

As disclosed by Scherrer, adaptive filters which analyze a signal for area-related and temporal image characteristics is described in WO 90/13978.

The examiner incorporates Rabii et al., US 5,220,414 (of WO 90/13978) which discloses taking the absolute values from sampled pixels (of the same phase) (Fig 2) in determining the image gradients in the vertical direction, horizontal and diagonal direction/temporal gradients(col 2, line 39-47). As shown in Fig 4, based upon five successive decision signals each consisting of the four single-decision signals (Fig 4), thus comparing previous gradients with current gradients in determining the temporal difference between frames.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Scherrer and Rinaldi which disclose an adaptive filter system which computes horizontal, vertical and diagonal gradients in order to adaptively filter the signal to remove noise and optionally convert the separated luminance/chrominance information into a desired display format, with Rabii, by using the absolute value of the difference between pixels which would provide the difference

(gradient) between the frames of pixels, where the gradient would be a non-negative number.

Allowable Subject Matter

4. Claims 7 and 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to show claims 7, 22 and 23, which include all base/intervening claims; which additionally select a filter (horizontal (claim 7), 2D (claim 22), or 3D (claim 23)) to perform the Y/C separation if the H, V, or T constancy value respectively is less than the predetermined threshold, the separation including adding or subtracting discrete samples on same scan lines, adjacent scan lines or different frames, respectively.

Scherrer discloses a system which weights the outputs of the filters 3.1-3.4 (Fig 1), where the output of the filters are weighted in order to provide the separated luminance and chrominance information. Thus, Scherrer does not disclose the separation of the luminance and chrominance information as claimed in claims 7,22 and 23.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure—see newly cited reference US 6,674,488.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-4700.

BRIAN P. YENKE
Patent Examiner
Art Unit 2614

B.P.Y
August 24, 2004